
Gasoline and Diesel Prices and Taxes in Industrialized Countries

Romain Davoust

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European Governance and
the Geopolitics of Energy

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Introduction

This study looks at price and tax levels for automobile fuels in industrialized countries, the members of the Organisation for Economic Co-operation and Development (OECD).¹ These issues will be examined in a comparative perspective. Gasoline and diesel will be analyzed, also known as diesel fuel.² The primary source of statistics used is the International Energy Agency's *Energy Prices and Taxes* publication from the second quarter 2008, from where most figures cited in the tables and graphs come.

The study successively reviews the following categories of unleaded gasoline:

- Regular unleaded, with a RON of 91, sometimes 92³
- Premium unleaded 95, with a RON of 95, sometimes 96
- Super unleaded, with a RON of 98, sometimes 97
- Professional diesel: trucking companies
- Personal-use diesel: households

Fuels with lead, because of their ecological downsides, are commercially penalized (higher taxes). They are less common throughout the OECD, are becoming more rare, and are on their way to disappearance. Leaded gasoline will hardly be touched upon in this study.

The price paid at the pump for fuel (the retail price or the price paid by customers) is generally broken down into various costs, margins and taxes. These different elements correspond to the

1 Excluding Iceland and Greece (whose recent prices are unavailable). It must be pointed out that the OECD includes, besides old industrialized countries, certain Newly Industrialized Countries, and emerging or transitioning countries (Mexico, Turkey, South Korea, the Czech Republic...)

2 LPG and biofuel prices are not included in this study.

3 Research Octane Number, which measures the proportion of octane in fuel combination, that determines the fuel's reaction in the motor (source: <www.wikipedia.org>)

successive links in the technical-economic oil chain, a chain that goes “from the well to the pump”: oil’s costs of production, the tax systems in producing countries, costs for crude transport, refinery costs, distribution costs, oil companies’ profits, and taxes in the consumer country.

Beyond national specificities, there are two types of taxes levied in the consumer country: specific taxes on oil products (these are “excise taxes,” such as the TIPP⁴ in France) and general sales taxes (applied equally to all consumer goods, such as the Value Added Tax). Other fuel taxes exist, notably those, which are sometimes substantial, that are collected to account for road infrastructure use by automobilists (which are used to finance road maintenance and construction).

It is necessary to look at an important distinction for the rest of the study. Excise or transport taxes are officially expressed by a fixed rate (cents collected per liter), and are in fact only aimed at volumes sold⁵. On the other hand, as its names indicates, the VAT applies to the nominal value of gasoline, in other words to its price, and is indeed proportional to the economic price of fuel.

To simplify matters in this study, total prices will be broken down into two main components or sub-groups:

- The price before taxes⁶, or excluding taxes⁷, or even base price
- Actual taxes, meaning the total nominal amount of taxes collected by the public authorities of the consumer country.

It is necessary to note that, simply because of the presence of a fixed tax system (excise tax, road taxes) in the tax structure, the total proportion of taxes in the price paid at the pump tend to decrease when oil prices fall on the international market.⁸

This study will thus focus on the total price of fuel, the base price (before taxes), the actual taxes, as well as the proportions between these three variables. Prices and taxes will be expressed in the same unit, US\$/liter (or \$/toe [ton of oil equivalent] in part five), and in the money of the day (nominal value).

⁴ Taxe Intérieure de consommation sur les Produits Pétroliers

⁵ The rate of this excise tax is generally differentiated as a function of the ecological properties of fuels (sulfur level) or according to the final user (business/individual, for diesel)

⁶ Equivalent to the wholesale prices of fuels if one subtracts distribution costs, which are relatively low

⁷ Attention: in this study, by “price excluding taxes” we do not mean the price excluding the classic VAT, but more simply the price before public taxes by the authorities of the consumer country.

⁸ With all else being equal

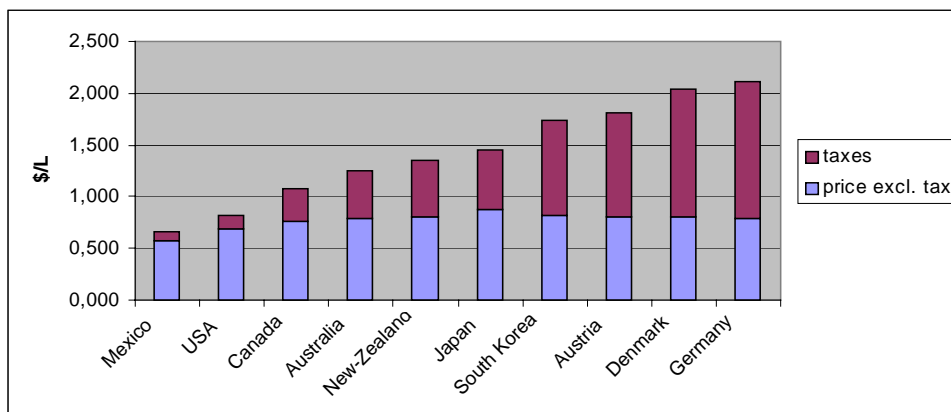
The study first compares the current price and tax levels of gasoline and diesel⁹ of the various member states of the OECD. Secondly, in a more dynamic perspective, the study examines the various trajectories followed since the beginning of the 2000s¹⁰ (notably the correlation with the “2000s energy crisis”).

⁹ Average values for the first quarter of 2008

¹⁰ Average yearly values since 2000

Regular Unleaded Gasoline

Graph 1: Regular Unleaded Gas Prices (1st quarter 2008)



This sample, though small, reveals several very general constants on the price of vehicle fuels. First of all, fuel costs do not vary much between the countries because crude oil and its derivatives are traded on the global markets; the differences in consumer prices are thus explained by the variability in national fiscal policies. It is truly the tax burden that, when added to the base price, produces price gaps at the pump (graph 1).

Due to high taxes, gas prices are notoriously elevated in Europe, with Germany, Austria and Denmark shown here at around 2 \$/liter. On the other hand, the lowest taxes within the OECD are found in North America, where they are much closer to the base price (0.57 US\$/1).¹¹ It is also important to note the particularly modest gas prices in Mexico, where weak taxes correspond to the fact that this country voluntarily provides its citizens with a form of fuel subsidy.¹² Gas is equally inexpensive in the US and Canada, despite their system of double taxation (at the federal level as well as at the state or provincial level¹³). In the US, taxation mainly consists of a road tax, around 10 cents per liter.

¹¹ On average for imported crude within the IEA for the first quarter of 2008.

¹² International Fuel Prices (IFP) 2007. Available on:

<www.gtz.de/en/themen/umwelt-infrastruktur/transport/10285.htm>

¹³ Even at the municipal level in Canada.

Australia also practices double taxation, but tax credits exist. In New Zealand, in addition to excise taxes and the VAT, there is a specific tax of a little less than 10 cents a liter, which goes into a public fund to prevent automobile accidents.

Prices at the pump in South Korea, and to a lesser extent Japan, are amongst the highest in the Asia-Oceania region, due to high taxes levied by the central authorities. In South Korea, taxes on transport are significant. In Japan, in addition to the normal gas tax, a surtax was instituted three decades ago that, because of its temporary nature, must be regularly renewed by Parliament.

Therefore, within industrialized countries, with wholesale prices being equal, final gasoline costs can be currently classified into three groups, according to the direction of their tax policy:

- Countries with moderate prices due to low taxes: North America, including Mexico, the US, and to a certain extent, Canada
- Countries with high prices: Europe, where taxes can easily pass \$1/liter
- Countries with intermediate prices: Asia-Oceania, i.e., Japan, South Korea, Australia, and New Zealand, with taxes that are situated between those of the US and Europe

These three groups¹⁴ are thus organized around two reference points: the price at the pump in the US and the lowest gas prices in Europe¹⁵.

¹⁴ This is a subjective classification, done for methodological needs of the study, since Japan and South Korea could be put in the "high price" category, just as Canada could be put in the intermediary group

¹⁵ These are roughly the levels set out by the IFP. The cheapest prices in the EU are often found in Luxembourg, which deliberately has an attractive tax policy.

Table 1

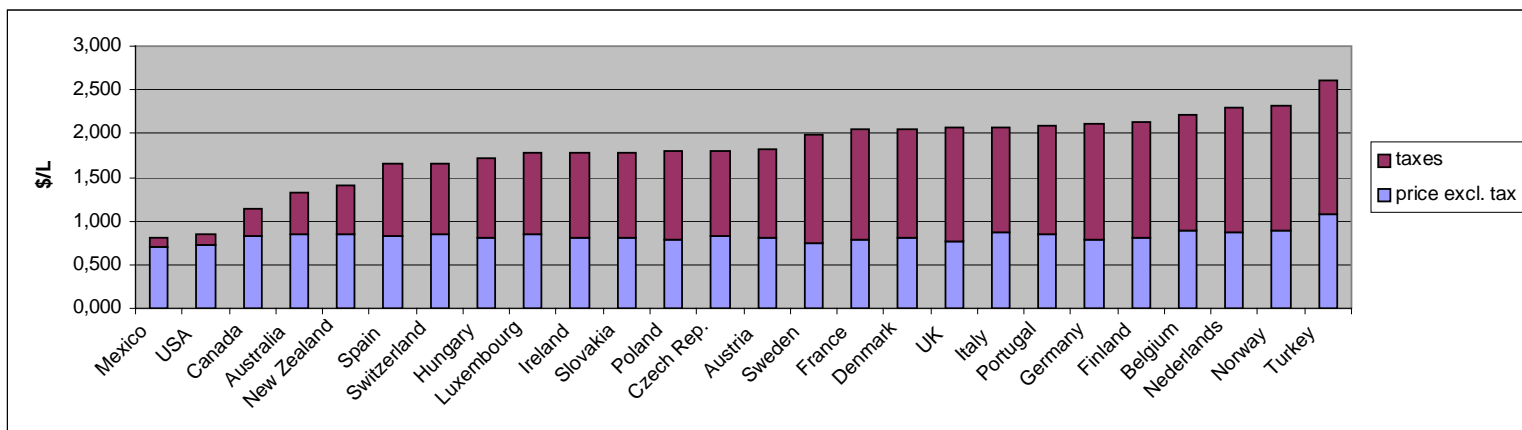
Regular	Price Before Taxes	Taxes	Total Price	Taxes / Total Price		Taxes / Price Before Taxes	
Mexico	0.571	0.085	0.656	Mexico	13%	Mexico	15%
The United States	0.687	0.133	0.82	The United States	16%	The United States	19%
Canada	0.758	0.322	1.08	Canada	30%	Canada	42%
Australia	0.786	0.457	1.243	Australia	37%	Australia	58%
New Zealand	0.804	0.550	1.354	Japan	40%	Japan	66%
Japan	0.876	0.581	1.457	New Zealand	41%	New Zealand	68%
South Korea	0.823	0.910	1.733	South Korea	53%	South Korea	111%
Austria	0.807	1.010	1.817	Austria	56%	Austria	125%
Denmark	0.807	1.232	2.039	Denmark	60%	Denmark	153%
Germany	0.786	1.328	2.114	Germany	63%	Germany	169%

In table 1, the classification of country by retail price logically lists them in terms of their tax burden. In relation to prices paid by consumers, taxation is thus the lowest in North America (16% of the price at the pump in the US) and the highest in Europe (over 50% of the final price), with the countries of Asia-Oceania fitting in between these two extremes with average tax rates. It is the same for tax rates when they are calculated as a function of pre-tax prices¹⁶: in Mexico and the US, taxes bring about an increase of 15-20% in relation to base prices, while in Denmark and Germany is it around 150-170%.

¹⁶ Given the relative homogeneity of gas prices before taxes

Unleaded Gasoline - 95 (Premium)

Graph 2: Unleaded 95 Gas Prices (1st Quarter 2008)



The high cost of vehicle fuel in Europe persists no matter the type of fuel in question: in Mexico and the US, unleaded 95 is around 0.8\$/liter at the pump, while in Europe, prices begin at 1.6\$/l (graph 2). More generally, Mexico and the US have similar gas prices, while European rates are double.

Within Europe itself, continental distribution of gas prices, from 1.65\$/l in Spain to 2.6\$ in Turkey, is relatively varied (table 2). These discrepancies in prices at the pump are above all a product of the heterogeneity of excise taxes. In addition, gas prices are often more moderate in Eastern countries: unleaded 95 is only at around 1.7-1.8\$ in Austria, Hungary, Poland, and the Czech Republic¹⁷. Price differences between northern and southern Europe on the other hand are barely noticeable.

Final gas prices in Turkey are amongst the highest in the world¹⁸. Since 1995, Turkey has greatly raised fuel prices in order to compensate for the decrease in actual tax revenue caused by rampant inflation¹⁹.

¹⁷ Prices at the pump are lower still in the Baltic states (non-OECD)

¹⁸ With those of Norway and Iceland

¹⁹ IFP

Table 2

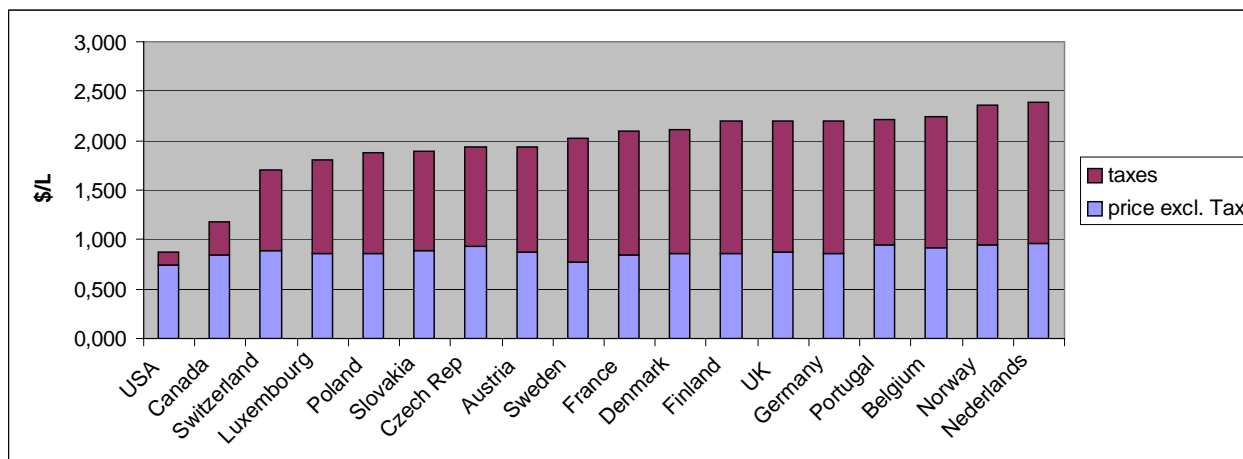
Unleaded 95	Price before Taxes	Taxes	Total Price	Taxes / Total Price		Taxes / Price before taxes	
Mexico	0.706	0.106	0.812	Mexico	13%	Mexico	15%
United States	0.718	0.133	0.851	United States	16%	United States	18%
Canada	0.830	0.315	1.145	Canada	28%	Canada	38%
Australia	0.851	0.465	1.316	Australia	35%	Australia	55%
New Zealand	0.849	0.555	1.404	New Zealand	40%	New Zealand	65%
Spain	0.823	0.826	1.649	Switzerland	49%	Switzerland	95%
Switzerland	0.849	0.805	1.654	Spain	50%	Spain	100%
Hungary	0.808	0.900	1.708	Luxembourg	52%	Luxembourg	110%
Luxembourg	0.846	0.928	1.774	Hungary	53%	Hungary	111%
Ireland	0.807	0.979	1.786	Czech Republic	54%	Czech Republic	119%
Slovakia	0.800	0.989	1.789	Austria	55%	Ireland	121%
Poland	0.777	1.014	1.791	Ireland	55%	Slovakia	124%
Czech Republic	0.824	0.982	1.806	Slovakia	55%	Austria	124%
Austria	0.814	1.011	1.825	Poland	57%	Poland	130%
Sweden	0.745	1.241	1.986	Italy	58%	Italy	137%
France	0.795	1.249	2.044	Turkey	59%	Turkey	144%
Denmark	0.816	1.235	2.051	Belgium	60%	Portugal	148%
United Kingdom	0.765	1.302	2.067	Denmark	60%	Belgium	148%
Italy	0.874	1.196	2.07	Portugal	60%	Denmark	151%
Portugal	0.842	1.243	2.085	France	61%	France	157%
Germany	0.786	1.328	2.114	Norway	61%	Norway	159%
Finland	0.806	1.331	2.137	Finland	62%	Netherlands	162%
Belgium	0.894	1.324	2.218	Netherlands	62%	Finland	165%
Netherlands	0.878	1.421	2.299	Germany	63%	Sweden	167%
Norway	0.894	1.423	2.317	United Kingdom	63%	Germany	169%
Turkey	1.066	1.533	2.599	Sweden	63%	United Kingdom	170%

Here again, the determining factor in international price differences resides with taxes. Indeed, prices before taxes are very similar (between 0.7\$/l and 0.9\$ except in Turkey), but the tax burden is very high in Europe, where the sum of taxes alone exceed the pre-tax price, up to more than 70% in the United Kingdom (table 2). Thus, in Europe, taxes are higher than 0.8\$/l and are greater than 1.2\$ in France, Germany, the UK, as well as in the Nordic countries.

Under these conditions, the percentage of taxes in the price of gas at the pump in Europe constitutes at least half the total cost, and can reach up to close to two-thirds of it in northern countries.

Unleaded Gasoline - 98 (Super)

Graph 3: Unleaded 98 Gas Prices (1st Quarter 2008)



Unleaded 98 prices show little difference in terms of level or structure compared to that of unleaded 95: prices at the pump are both high, and taxes are similar. The only difference is that the price before taxes of unleaded 98 is a bit higher than unleaded 95, given the difference in quality.

The situations in Norway and the UK merit discussion. These two countries present at first glance a paradox in the sense that, although they are both oil producers, gas prices paid by consumers in these countries are amongst the highest in Europe and the rest of the world. In Norway, this is explained by an oil tax system that claims to be green, while in the UK, the introduction of a tax escalator in the 1990s²⁰ has made British gas prices go from the lowest to the highest within Europe.²¹

Be that as it may, within the EU, the price and tax heterogeneity of fuel (table 3) poses an obvious competitive and institutional problem.

²⁰ Has since been abolished

²¹ Source: <www.petrolprices.com/fuel-tax.html>

Table 3

Unleaded 98	Price Before Taxes	Taxes	Total Price	Taxes / Total Price		Taxes / Price Before Taxes	
United States	0.747	0.133	0.88	United States	15%	United States	18%
Canada	0.846	0.337	1.183	Canada	29%	Canada	40%
Switzerland	0.895	0.809	1.704	Switzerland	48%	Switzerland	90%
Luxembourg	0.863	0.938	1.801	Luxembourg	52%	Czech Republic	108%
Poland	0.853	1.031	1.884	Czech Republic	52%	Luxembourg	109%
Slovakia	0.883	1.004	1.887	Slovakia	53%	Slovakia	114%
Czech Republic	0.928	1.002	1.93	Austria	55%	Poland	121%
Austria	0.875	1.066	1.941	Poland	55%	Austria	122%
Sweden	0.774	1.248	2.022	Portugal	57%	Portugal	133%
France	0.842	1.252	2.094	Belgium	59%	Denmark	144%
Denmark	0.863	1.247	2.11	Denmark	59%	Belgium	146%
Finland	0.854	1.342	2.196	France	60%	Norway	148%
United Kingdom	0.878	1.322	2.2	Norway	60%	France	149%
Germany	0.865	1.341	2.206	Netherlands	60%	Netherlands	150%
Portugal	0.949	1.263	2.212	United Kingdom	60%	United Kingdom	151%
Belgium	0.912	1.330	2.242	Germany	61%	Germany	155%
Norway	0.953	1.405	2.358	Finland	61%	Finland	157%
Netherlands	0.956	1.435	2.391	Sweden	62%	Sweden	161%

Diesel

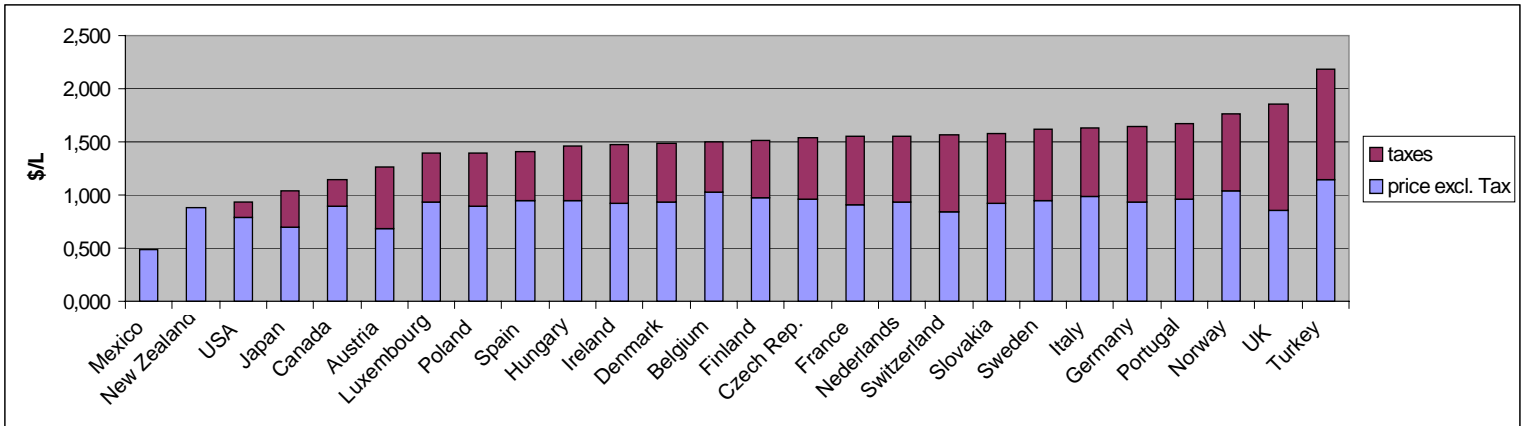
Diesel is the most expensive petroleum product to refine, which is evident in its higher wholesale prices in relation to gasoline. But on the other hand, diesel tax is relatively lower because this fuel is used mainly by companies, while gasoline is mostly consumed by individuals.²² States are now more often implementing a differentiated tax system for professional and private diesel use.

In Mexico, retail diesel prices are exceptionally low for the OECD: 0.49\$/l for companies, and 0.55\$ for individuals (graphs 4a and 4b). In New Zealand, diesel for professional use is tax exempt,²³ and individual use diesel is minimally taxed (11% of the total price). In Europe, there are considerable taxation differences on diesel between countries, which lead to important gaps in prices at the pump: retail prices for professional diesel are between 1.25\$1 in Austria and 1.85\$ in the UK, creating competition distortions (tables 4a and 4b).

²² For good reason, the economic advantage of using diesel increases with the amount of kilometers driven

²³ But above a certain weight, vehicles are subject to a road tax

Graph 4a: Professional Diesel Prices (1st Quarter 2008)



Graph 4b: Individual Diesel Prices (1st Quarter 2008)

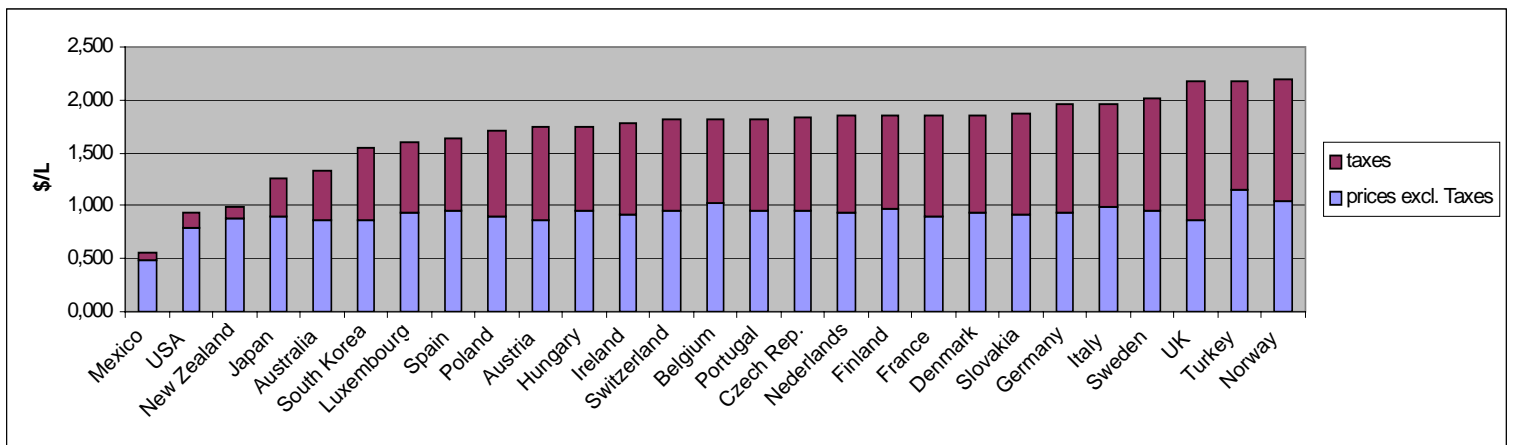


Table 4a

Diesel-professional	Price before Taxes	Taxes	Total Price	Taxes / Total Price		Taxes / Price before Taxes	
Mexico	0.481	-	0.481	Mexico	-	Mexico	-
New Zealand	0.878	0.003	0.881	New Zealand	0%	New Zealand	0%
United States	0.795	0.137	0.932	United States	15%	United States	17%
Japan	0.698	0.341	1.039	Canada	22%	Canada	28%
Canada	0.889	0.252	1.141	Belgium	32%	Belgium	47%
Austria	0.680	0.581	1.261	Spain	32%	Spain	48%
Luxembourg	0.937	0.456	1.393	Japan	33%	Luxembourg	49%
Poland	0.901	0.500	1.401	Luxembourg	33%	Japan	49%
Spain	0.951	0.456	1.407	Hungary	35%	Hungary	54%
Hungary	0.950	0.509	1.459	Finland	36%	Poland	56%
Ireland	0.923	0.556	1.479	Poland	36%	Finland	57%
Denmark	0.933	0.548	1.481	Denmark	37%	Denmark	59%
Belgium	1.020	0.480	1.5	Ireland	38%	Ireland	60%
Finland	0.967	0.549	1.516	Czech Republic	38%	Czech Republic	61%
Czech Republic	0.960	0.583	1.543	Italy	39%	Italy	64%
France	0.902	0.645	1.547	Netherlands	40%	Netherlands	67%
Netherlands	0.930	0.623	1.553	Norway	41%	Sweden	70%
Switzerland	0.838	0.725	1.563	Sweden	41%	Norway	70%
Slovakia	0.920	0.658	1.578	France	42%	Slovakia	72%
Sweden	0.949	0.663	1.612	Slovakia	42%	France	72%
Italy	0.989	0.638	1.627	Germany	43%	Portugal	74%
Germany	0.932	0.709	1.641	Portugal	43%	Germany	76%
Portugal	0.959	0.708	1.667	Austria	46%	Austria	86%
Norway	1.037	0.723	1.76	Switzerland	46%	Switzerland	87%
United Kingdom	0.858	0.996	1.854	Turkey	47%	Turkey	89%
Turkey	1.151	1.029	2.18	United Kingdom	54%	United Kingdom	116%

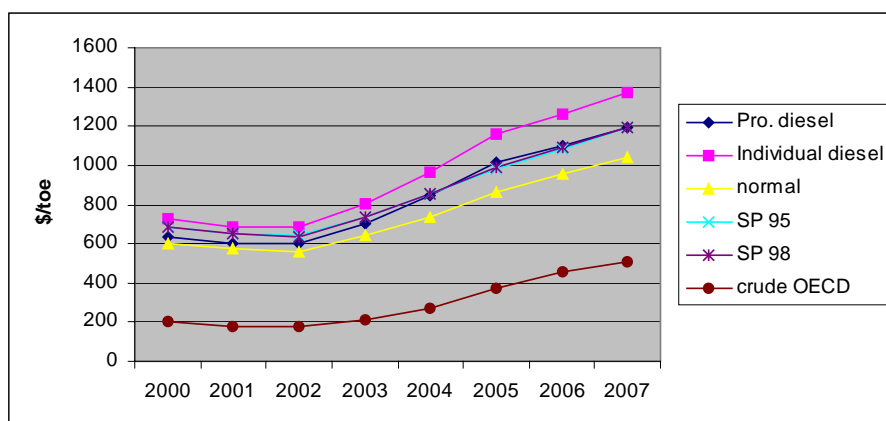
Table 4b

Diesel - individual	Price before taxes	Taxes	Total Price	Taxes / Total Price		Taxes / Price before taxes	
Mexico	0.479	0.072	0.55	New Zealand	11%	New Zealand	13%
United States	0.795	0.137	0.932	Mexico	13%	Mexico	15%
New Zealand	0.878	0.113	0.991	United States	15%	United States	17%
Japan	0.907	0.351	1.258	Japan	28%	Japan	39%
Australia	0.869	0.466	1.335	Australia	35%	Australia	54%
South Korea	0.871	0.667	1.538	Spain	42%	Luxembourg	71%
Luxembourg	0.937	0.665	1.602	Luxembourg	42%	Spain	72%
Spain	0.951	0.681	1.632	South Korea	43%	South Korea	77%
Poland	0.901	0.808	1.709	Belgium	44%	Belgium	78%
Austria	0.863	0.880	1.743	Hungary	46%	Hungary	84%
Hungary	0.950	0.800	1.75	Poland	47%	Switzerland	89%
Ireland	0.923	0.866	1.789	Switzerland	47%	Turkey	89%
Switzerland	0.961	0.853	1.814	Turkey	47%	Poland	90%
Belgium	1.020	0.795	1.815	Finland	48%	Portugal	90%
Portugal	0.958	0.867	1.825	Ireland	48%	Finland	91%
Czech Republic	0.960	0.876	1.836	Portugal	48%	Czech Republic	91%
Netherlands	0.930	0.918	1.848	Czech Republic	48%	Ireland	94%
Finland	0.968	0.882	1.85	Italy	49%	Italy	98%
France	0.903	0.948	1.851	Denmark	50%	Denmark	98%
Denmark	0.934	0.919	1.853	Netherlands	50%	Netherlands	99%
Slovakia	0.920	0.958	1.878	Austria	51%	Austria	102%
Germany	0.932	1.022	1.954	France	51%	Slovakia	104%
Italy	0.989	0.965	1.954	Slovakia	51%	France	105%
Sweden	0.949	1.065	2.014	Germany	52%	Germany	110%
United Kingdom	0.858	1.320	2.178	Norway	53%	Sweden	112%
Turkey	1.151	1.029	2.18	Sweden	53%	Norway	112%
Norway	1.036	1.164	2.2	United Kingdom	61%	United Kingdom	154%

Prices and Taxes Since 2000

In the OECD

Graph 5a: Evolution of the Average Annual Price for Vehicle Fuel in the OECD (2000-2007)



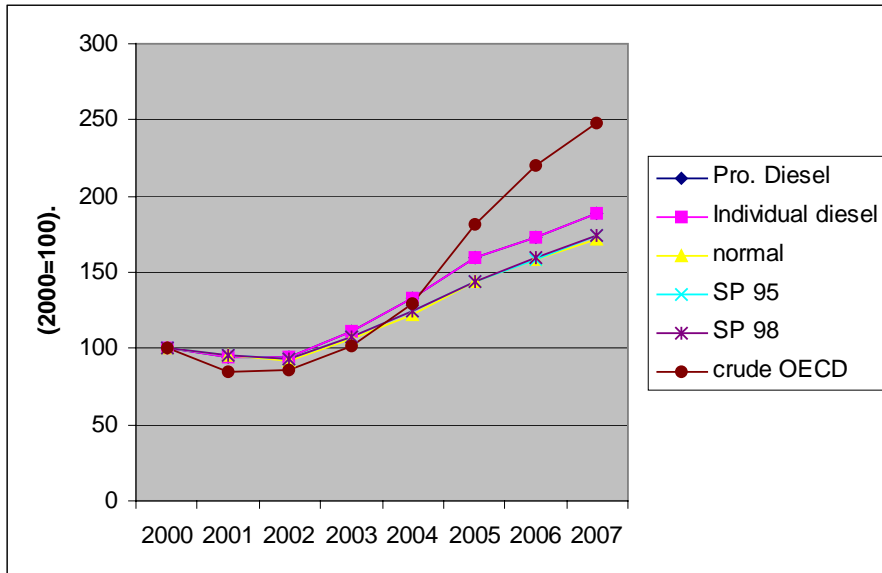
Prices at the pump for diesel and gasoline, derived petroleum products, globally follow the price of a barrel of oil²⁴ (graph 5a'). With crude prices soaring since 2004, automobile fuel prices have also seen a pronounced increase, yet however to a clearly lesser extent (graph 5a), due to the fact that the price of crude is only one component in the price setting structure: the presence of non-proportional costs and taxes helps absorb the extrinsic effects of the oil market.

In the OECD, diesel for individual use remains on average the most expensive fuel with 1372.6\$/toe in 2007, and regular gasoline the cheapest at 1038.5\$/toe. Globally, as graph 5a' indicates, diesel prices have increased more than gasoline prices over the last few years: diesel has seen an increase of close to 90% since 2000, while gasoline has gone up by a bit more than 70%. This is explained by high international demand for this product, and the aggressiveness of Asian demand, which is straining diesel refining capabilities.

²⁴ Annual average price for crude oil imported in the IEA

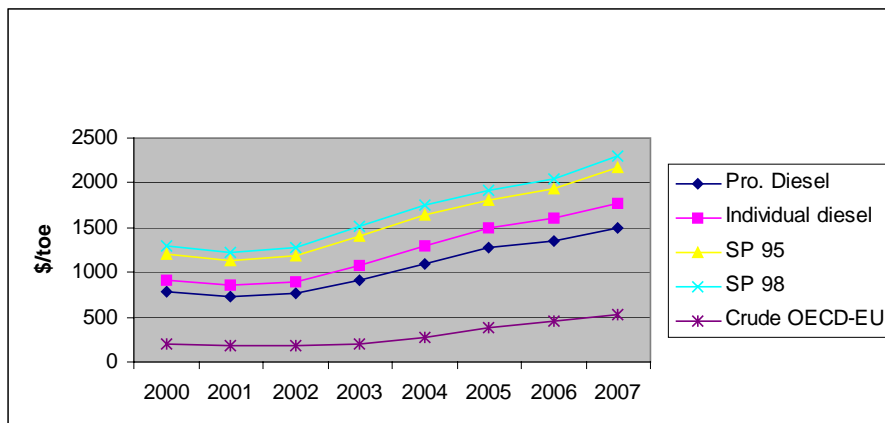
For this reason, diesel in the US, which in the past was cheaper than gasoline, is now more expensive than gas, a trend that began in 2004. Another explanatory factor is that American diesel supply is now more limited due to a transition to more strict refining norms.

Graph 5a': Nominal Price Index for Vehicle Fuel in the OECD (2000-2007)



In Europe

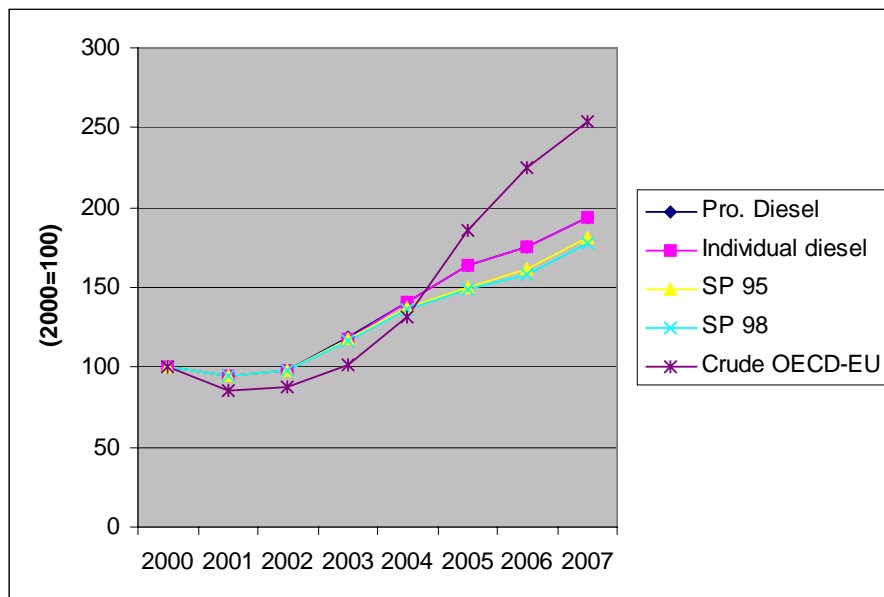
Graph 5b: Evolution of the Average Annual Price for Vehicle Fuel in the European OECD Countries (2000-2007)



In European OECD countries, the price of diesel has not yet caught up with that of gasoline, but the gap between the two is dwindling due to events on the market (graph 5b). There is indeed assertiveness in European consumption of diesel (in Europe, 50% of cars use diesel). On the other side, gasoline needs, coming mainly from households, can be more easily accommodated than diesel consumption, which is more difficult to curb since it is an integral part of business expenses for trucking companies.²⁵ The shrinking gap between gas and diesel is also explained by the fact that the differential between these two fuels above all corresponds to taxes: with taxes on diesel being lower, an increase in oil prices results in an increase in diesel prices that is proportionally greater compared to gasoline.

In the end, since the beginning of the 2000s, prices at the pump for diesel have increased more than that of gasoline (graph 5b'): around 93-94% versus 78-80%. However, one is far from the situation in the US: unleaded 95 in the OECD-Europe rose to 2,183.2\$/toe on average in 2007, unleaded 98 to 2,303\$, while the price of diesel was only 1,501.1\$/toe for professional use, and 1,777.1\$ for individual use.

Graph 5b': Nominal Price Index for Vehicle Fuel in the European OECD Countries (2000-2007)



²⁵ See: <econoclaste.org.free.fr/dotclear/index.php/?2008/06/10/1283-le-diesel-au-prix-de-l-essence>

Oil Prices and Taxation

The recent tightening of oil markets spontaneously increased fuel prices. This increase resulted in a decline in the proportion of taxes in the total price of gas in an overwhelming majority of OECD countries, and often by a considerable amount. In Europe for example, the percentage of tax, which previously accounted for between two-thirds and three-fourths of the total price depending on the state, fell to where it now stands, at around 50-60%.

This reduction in tax is partly due to a purely arithmetic effect, and/or in certain countries, to voluntary policies of tax relief with the goal of mitigating the impact of soaring oil prices on the final consumer, as South Korea recently did.²⁶ In Japan, after parliamentary equivocation, surtaxes on gasoline were finally extended for the year 2008 at 24 US cents for budgetary and environmental reasons (with respect to the Kyoto Protocol). In the US, various proposals to suspend federal or state taxes have recently been debated (tax relief, or the 'tax holiday').

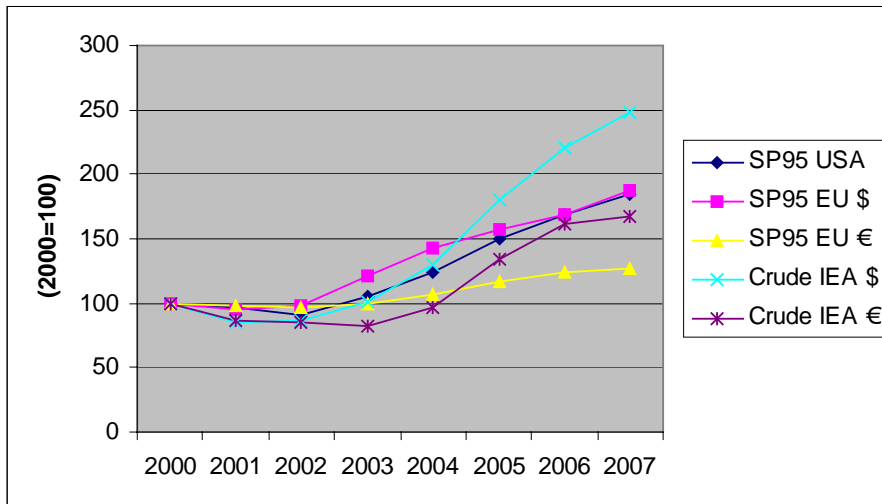
For its part, the European community has been reticent to lower taxes on oil products so as to not relax its environmental efforts, as elevated fuel prices indeed represent an important tool in the hopes of moderating the use of fossil fuels. Faced with rising oil prices, European countries have the tendency to opt for palliative measures that benefit the most at risk sectors.

More generally, in industrialized countries, any decrease in gasoline taxation comes up against, besides the environmental concern, a desire on the part of government to preserve public finances that are often threatened.

²⁶ Whose economy is generally very dependent on oil. Available on: www.iht.com/articles/2008/06/29/business/renkor.php

EU-US Comparison

Graph 5d: Nominal Price Index for Unleaded 95 in the US and the Euro Zone



Since crude oil is generally sold in dollars, the depreciation of the dollar in relation to the euro over the last few years has mitigated the negative effects of increasing oil prices on the European economy. It is logically the same for gas prices at the pump: unleaded 95 in the euro zone²⁷ increased by 88% from 2000-2007 when converted to dollars²⁸, which is the same rate as in the US (+84%), but only at 27% when expressed in euros. For good reason, in the EMU,²⁹ a strong euro and a strong tax system have both been important barriers to pressures from the international crude oil markets and oil derivative markets. The euro/dollar parity have in this respect played a decisive role, by tempering wholesale gas prices to the European economy's benefit.

²⁷ Not including Greece

²⁸ For gasoline initially being sold in euros

²⁹ Economic and Monetary Union of the European Union

Conclusion

In *Les Grandes Batailles de l'Energie*³⁰, J.M. Chevalier argues that crude oil prices are politically regulated. The same could be said of gas prices, since tax systems, created within differentiated national contexts, are a major policy component. The recent, and sometimes violent confrontations caused by increases in fuel prices (discontent of fishermen and truckers in Europe, riots in Nigeria...) points to the fact that gas prices are politically sensitive, just as oil prices are.

According to *International Fuel Prices*, the US is the OECD member country whose gas prices are closest to the theoretical ones. In fact, in setting aside its minor taxes, prices at the American pump can be viewed as the normal retail price for gas, that is to say as a price that is determined only by technical, economic and competitive conditions in the value chain, without the effect of national taxation attitudes.³¹

On this basis, gas prices that are greater than this reference price are taxed prices, and any price that is less is subsidized (negative taxation).³² Prices in industrialized countries are thus politically taxed, and bordered by two emerging countries, with Mexico's modest prices at one extreme, and Turkey's radically high prices at the other.

Gas taxes serve several purposes simultaneously: they are a source of important revenue for the state budget, they finance the maintenance and construction of roads, and they make drivers pay for the various externalities that they generate (road congestion, pollution...).³³ Out of these diverse functions – financing, regulation, and environmental clean up – it's the latter that is now being called upon to play a greater role, due to global warming. Indeed, given that transport, especially trucking, is the largest final demand sector emitter of CO₂, the principle of environmental taxation on fuel (green taxation) represents an obligatory practice for any climate policy worthy of that title.

³⁰ Ed. Gallimard (2004), Pg. 351

³¹ One will note that total gas prices in the US can indeed be understood as an approximation (or variable proxy) of gasoline's market value.

³² Subsidized gas is found above all in producer countries and in other developing countries, which thus practice price controls; but however, the majority of non-OECD countries tax gasoline.

³³ IFP

In this respect, one will note that Europe's fuel taxes, which at the beginning were originally designed as an energy measure (to decrease dependence on petroleum imports), today serve as environmental taxes. Prices at the pump in Europe are thus becoming financially deterrent for the final consumer. On the other hand, the US, where fuel is two times less expensive, seems to be behind on the environmental front. However, despite still moderate prices, American gas is being directly affected by the current trends in the oil markets: the increase in oil prices lead to much higher increases in gas prices than experienced in Europe. For their part, South Korea, Japan and Australia are moving towards much higher gas prices, which are nearing those charged in Europe. Moreover they include an environmental premium due to Kyoto's legal binding commitments.

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